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EXAMINER

GOFF II, JOHN L.

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 06/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/085,714

Applicant(s)

KINKELIN ET AL.

Examiner

John L. Goff

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(e). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by this Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/19/04.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 7-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the amendment received 4/19/04. The previous 35 USC 112 rejections have been overcome.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

3. Claims 1, 4, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Frankosky (WO 91/09166).

Frankosky discloses a method of bonding a hydrophilic copolyetherester film to a polyester batt (i.e. fabric) lining using a hotmelt polyester adhesive wherein the bonded composite has an improved ability to avoid delamination. Frankosky teaches the film (directly bonded to the polyester batt through the layer of adhesive) may comprise a single layer of hydrophilic copolyetherester or a multilayer film laminate of hydrophilic copolyetherester and hydrophobic copolyetherester, the hydrophilic copolyetherester film formed from materials including terephthalic acid, butanediol, and polyethylene glycol (molecular weight of 2000), it being noted the hydrophilic copolyetherester materials employed in Frankosky are the same as those claimed by applicant and they are consistent and in agreement with applicants specification (Page 7, paragraph 24) such that the hydrophilic copolyetherester film taught by Frankosky would intrinsically have the claimed melting point (Page 2, lines 35-38 and Page 3, lines 1-40 and Page 4, lines 1-40 and Page 5, lines 1-20 and Examples 1-4).

Claim Rejections - 35 USC § 103

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frankosky as applied in paragraph 3 above, and further in view of either one of Mahler (U.S. Patent 5,418,044) or the admitted prior art (Specification pages 1-3).

Frankosky as applied above teaches all of the limitations in claim 3 except for an express teaching that the hydrophobic copolyetherester film has all of the claimed characteristics. However, it is noted that the hydrophobic copolyetherester film taught by Frankosky has the same long chain and short chain units as those claimed (i.e. the film is analogous to Sympatex), and one of ordinary skill in the art at the time the invention was made would have readily appreciated using as the hydrophobic copolyetherester film taught by Frankosky any of the well known and conventional films in the art having the same disclosed long chain and short chain units such as the hydrophobic copolyetherester film suggested by either one of Mahler or the admitted prior art as only the expected results would be achieved.

Mahler discloses a hydrophobic copolyetherester film, e.g. a Sympatex film, formed of the same long chain and short chain units as the hydrophobic copolyetherester film taught by

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Frankosky that has the same characteristics as those disclosed in claim 3 (Column 1, lines 13-15 and Column 4, lines 49-68 and Column 5, lines 1-19). The admitted prior art discloses it is known to bond a hydrophobic copolyetherester film (such as Sympatex a film formed of the same long and short chain units as the hydrophobic copolyetherester film taught by Frankosky and having the same characteristics as those disclosed in claim 3) to a polyester fabric or interlining using a polyester or copolyester based hot melt adhesive. The admitted prior art teaches the adhesive is applied by any of the known methods such as scatter coating, double dot coating, paste coating, or paste-dot coating. However, the admitted prior art teaches that these laminate are not resistant to multiple washings at 60 °C (Paragraphs 4, 7, and 10).

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frankosky as applied in paragraph 3 above, and further in view of the admitted prior art.

Frankosky as applied above teaches all of the limitations in claim 6 except for a specific recitation of how the hotmelt polyester adhesive is applied. However, Frankosky teaches that any well known and conventional technique can be used to apply the adhesive such that it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the hotmelt polyester adhesive taught by Frankosky using any of the well known and conventional techniques for applying hotmelt polyester adhesives such as paste dot coating, powder dot coating, scatter coating, etc. as these were well known techniques in the art for applying polyester adhesives as shown for example by the admitted prior art (See above for a full description of the admitted prior art) and only the expected results would be achieved.

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7. Claims 1, 2, and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horn (U.S. Patent 5,447,783) in view of any one of Tanaka et al. (U.S. Patent 4,130,603), Frankosky, or the admitted prior art.

Horn discloses a method of bonding a multilayer laminate comprising a hydrophilic copolyetherester film (formed from terephthalic acid, polyethylene glycol [molecular weight of 400-3500 and specifically 2150 in the example], and low molecular weight diols including butanediol, diethylene glycol, triethylene glycol, etc.) and a hydrophobic copolyetherester film to a polyester fabric using conventional laminating adhesives to form a bonded composite having an improved ability to avoid delamination (Column 1, lines 6-49 and 56-58 and Column 2, lines 32-34 and 46-51 and Column 3, lines 4-7 and 43-48 and Column 4, lines 17-30 and Column 5, lines 46-49 and Column 7, lines 30-40 and Column 9, lines 45-58 and Column 10, lines 8-17 and the Examples). Horn is silent as to a particular adhesive for laminating the copolyetherester multilayer to the polyester fabric. However, Horn teaches conventional adhesives are used such that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the laminating adhesive taught by Horn any of the well known and conventional adhesives for laminating polyester layers (e.g. copolyetherester layer to a polyester fabric) such as those suggested by any of Tanaka et al., Frankosky (See above for a full description of Frankosky), or the admitted prior art (See above for a full description of the admitted prior art) as only the expected results would be achieved.

Regarding claim 2, Horn teaches the hydrophilic film comprises 25-68 wt.% polyethylene glycol and 20-80 wt.% short-chain ester units, e.g. diethylene glycol. Horn is not limited to any particular composition, and it would have been obvious to one of ordinary skill in

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the art at the time the invention was made to experimentally determine/optimize the hydrophilic layer composition as a function of the properties of the resulting product, e.g. the products resistance to water absorption, delamination, etc., as doing so would have required nothing more than ordinary skill and routine experimentation.

Regarding claim 5, it is noted the hydrophilic copolyetherester materials employed in Horn are the same as those claimed by applicant and they are consistent and in agreement with applicants specification (Page 7, paragraph 24) such that the hydrophilic copolyetherester film taught by Horn would intrinsically have the claimed melting point.

Tanaka et al. disclose a hotmelt polyester adhesive useful for bonding together polyester layers in textile articles to give the textile articles improved resistance to delamination. Tanaka et al. teach the adhesive is applied by techniques such as dotting or scattering (Column 1, lines 7-14, 38-43, and 57-61 and Column 2, lines 8-11 and 28-32 and Column 3, lines 49-53).

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horn and any one of Tanaka et al., Frankosky, or the admitted prior art as applied in paragraph 7 above, and further in view of either one of Mahler or the admitted prior art.

Horn as modified by any one of Tanaka et al., Frankosky, or the admitted prior art as applied above teach all of the limitations in claim 3 except for an express teaching that the hydrophobic copolyetherester film has all of the claimed characteristics. However, it is noted that the hydrophobic copolyetherester film taught by Horn has the same long chain and short chain units as those claimed (i.e. the film is analogous to Sympatex), and one of ordinary skill in the art at the time the invention was made would have readily appreciated using as the hydrophobic copolyetherester film taught by Horn as modified by any one of Tanaka et al.,

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Frankosky, or the admitted prior art any of the well known and conventional films in the art having the same disclosed long chain and short chain units such as the hydrophobic copolyetherester film suggested by Mahler (See above for a full description of Mahler) or the admitted prior art (See above for a full description of the admitted prior art) as only the expected results would be achieved.

9. Claims 1 and 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Horn or Frankosky.

The admitted prior art discloses it is known to bond a hydrophobic copolyetherester film (such as Sympatex) to a polyester fabric or interlining using a polyester or copolyester based hot melt adhesive. The admitted prior art teaches the adhesive is applied by any of the known methods such as scatter coating, double dot coating, past coating, or paste-dot coating. However, the admitted prior art teaches that these laminate are not resistant to multiple washings at 60 °C (Paragraphs 4, 7, and 10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the copolyetherester film taught by the admitted prior art a multilayer film comprising a hydrophilic copolyetherester layer and a hydrophobic copolyetherester layer as it was well known in the art to include in addition to the hydrophobic copolyetherester layer a hydrophilic layer as shown for example by either one of Horn (See above for a full description of Horn) or Frankosky (See above for a full description of Frankosky) to form a laminate with a better resistance to delamination.

Regarding claim 5, it is noted the hydrophilic copolyetherester materials employed in either Horn or Frankosky are the same as those claimed by applicant and they are consistent and in agreement with applicants specification (Page 7, paragraph 24) such that the hydrophilic

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copolyetherester film taught by Horn or Frankosky would intrinsically have the claimed melting point.

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Horn.

The rejections of the admitted prior art in view of Horn for claims 1 and 3-6 is detailed above in paragraph 9. However, regarding claim 2 Horn teaches the hydrophilic film comprises 25-68 wt. % polyethylene glycol and 20-80 wt. % shorts-chain ester units, e.g. diethylene glycol. Horn is not limited to any particular composition, and it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize the hydrophilic layer composition taught by the admitted prior art as modified by Horn as a function of the properties of the resulting product, e.g. the products resistance to water absorption, delamination, etc., as doing so would have required nothing more than ordinary skill and routine experimentation.

Response to Arguments

11. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection. In view of applicants amendments to claim 2 the rejections of claim 2 using Frankosky are withdrawn.

Applicant argues regarding Frankosky, "Page 5, lines 1-12 of the reference is explicit in specifying the composition of the hydrophobic layer. Specifically, the recitation includes two different isophthalates (the meta isomer) which are NOT included in Applicants claims, especially claim 2. Applicants use the para-benzene dicarboxylic acid exclusively.

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Example 3 if the reference recites a composition for copolyetherester elastomer (B) which is:

20.3% butanediol + terephthalic acid

7.9% butanediol + isophthalic acid

51.7% poly (tetramethylene ether) glycol (Mw=2000) + terephthalic acid

20. 1% poly (tetramethylene ether) glycol (Mw2000) + isophthalic acid

This is not Applicants' composition as used in the claimed method." The claims are not commensurate in scope with these arguments as the claims do not exclude additional components such as isophthalates.

Applicant further argues regarding Frankosky, "The differences between Applicants' claimed method and the Frankosky et al. reference method are not trivial. Note paragraph [0034] wherein the melting point of Applicants' adhesive is specified as 157 °C and a melt viscosity of 400 Pa at 190 °C. Bostik 5178 has an mp. of 130 °C (see attached) and the equivalent Griltex 6E has a melting range of 125-130 °C." It is noted paragraph [0034] refers to the melting point of the film of hydrophilic copolyetherester. Frankosky uses Bostik and Griltex 6E as laminating hot melt polyester adhesives not as the film of hydrophilic copolyetherester. In any event, it is noted the hydrophilic copolyetherester materials employed in Frankosky are the same as those claimed by applicant and they are consistent and in agreement with applicants specification (Page 7, paragraph 24) such that the hydrophilic copolyetherester film taught by Frankosky would intrinsically have the claimed melting point.

Applicant further argues, "Claim 3 had been rejected under 35 USC 103(a) over Frankosky et al. in view of Mahler, U.S. Patent No. 5,418,044 and Applicants' specification. The

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distinctions between Applicants' invention and Frankosky et al. have been noted. Mahler stands for the use of an adhesive to glue Sympatex® to a substrate without first coating the film. The example uses polyurethane adhesive. As stated in Applicant's specification, the combination falls apart on washing. Sympatex® cannot be glued directly to a substrate and especially not with an adhesive which violates bluesign ®standards." Mahler and the admitted prior art are applied solely as examples of known prior art hydrophobic films having the same long chains and short chains as Frankosky.

Applicant further argues, "Claims 1, 2 and 4-6 have been rejected over Horn, U.S. Patent No. 5,447,783 in view of Tanaka et al., U.S. Patent No. 4,130,603, Frankosky or the admitted prior art. Horn is described rightly as a Sympatex® analogue and it has been presumed that any of the Tanaka et al., Frankosky or the other prior art adhesives would be equivalent to the Applicants' claimed adhesive system. The adhesives are described rightly as "conventional" and are indeed the prior art to which Applicants refer in the specification. Tanaka et al. have been selected as a specific example of the prior art adhesives. Tanaka et al. include a mixture of terephthalates and isophthalates in approximately equal amounts (c.f. Examples 1 and 2) with melting points of 120° (col. 4, line 2), 124, 121 and 127 °C (col. 5, table). The comparisons used for testing peel strength bonded cotton to PET (col. 7, line 9-18). These conventional adhesives are not distinguishable from the Bostik 5178 or Griltex EMS 6D2-2. A comparable Grilter adhesive is used in Applicants' comparative example to demonstrate failure." Horn is not simply a Sympatex® analogue rather Horn describes a multilayer laminate comprising a hydrophobic film that is a Sympatex® analogue and a hydrophilic film of the present invention. As to the particular adhesives, Horn teaches using conventional adhesives, and Tanaka et al., Frankosky,

and the admitted prior art are cited as exemplary teachings of conventional adhesives in the same art as Horn.

Applicant further argues, "Claim 3 has been rejected over the art cited in the previous rejection (Horn over Tanaka et al.) in further view of Mahler, U.S. Patent No. 5,418,044. Mahler teaches the use of a number of adhesives including polyurethane (Practical Example, col. 6, lines 56-57), copolyesters and copolyamides (col. 5, lines 66-67). Use of such adhesives may be practicable in some instances but is not truly wash resistant and violates the bluesign® concept of total recyclability which forms the basis and objective of this invention." As noted above, Mahler and the admitted prior art are applied solely as examples of known prior art hydrophobic films having the same long chains and short chains as Horn.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is (571) 272-1216. The examiner can normally be reached on M-F (7:15 AM - 3:45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John L. Goff
June 2, 2004



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